

CLAIMS

1. A storage device comprising:
a controller configured to receive jobs from a source;
a set of components that receive, complete, and pass on jobs; and
5 job flow analysis devices configured to the controller to track the number of jobs received, completed, and passed on by each component, wherein the controller compares the number of jobs received with the sum of the number of jobs completed and passed on by each component.
- 10 2. The storage device of claim 1 wherein the controller is further configured to perform a corrective action on the RAID storage device and request from the source the jobs when the number of jobs received is greater than the sum of a threshold amount plus the number of jobs completed and passed on by one of the components.
- 15 3. The storage device of claim 1 wherein the set of components are arranged serially.
4. The RAID storage device of claim 1 wherein the job flow
20 analysis devices are comprised of job logs to record jobs received, completed, and passed on.
5. A method comprising:
determining a number of jobs received, completed, and passed on by a
25 process;
comparing the number of jobs received by the process and a sum of the number of jobs completed and passed on by the process;

deciding whether the sum a threshold amount and of the number of jobs completed and passed on is greater than the number of jobs received; and

performing a corrective action when the sum of the threshold amount and the number of jobs completed and passed versus the number of jobs
5 received is not acceptable.

6. The method of claim 5 wherein the comparing is performed over a common time period during which the numbers of jobs are received, completed, and passed on by the process.

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7. The method of claim 5 wherein the determining is performed by a counter for the jobs received, a counter for the jobs completed, and a counter for the jobs passed on.

15 8. The method of claim 7 wherein the determining is further comprised of tracking the jobs in job logs included in the counters.

9. The method of claim 5 wherein the determining comprises performing a bandwidth analysis at an input where the jobs are received, at an
20 output of where the jobs are completed, and at an output of where the jobs are passed on.

10. The method of claim 5 wherein the performing a corrective action
25 comprises requesting for jobs to be resent from a source.

11. The method of claim 5 wherein the process is one of a set of serial processes that receive, complete, and pass on jobs.

12. The method of claim 5 further comprising accounting for any
5 conditions that affect job flow other than input and output to the process and performing corrective action.

13. A storage device comprising:
a series of processes configured to count jobs received, completed, and
10 passed on by each process;
a set of counters to track numbers of jobs received, completed, and passed on by each process in the series of processes; and
a controller that compares from the counters the number of jobs received versus the sum of the number of jobs completed and passed on by each process.

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14. The storage device of claim 13 wherein the set of counters are comprised of job logs to record particular jobs received, completed, and passed on at each counter.

15. The storage device of claim 13 wherein the jobs are received
20 from a device which communicates with the storage device.

16. The storage device of claim 13 wherein the controller tracks conditions that affect job flow other input and output to the processes and
25 performing corrective action.

17. A system that comprises the storage device of claim 13.

18. A processor-readable medium comprising processor-executable instructions for analyzing job flow in a process, the processor-executable instructions comprising instructions for:

5 tracking a number of jobs received, jobs completed, and jobs passed on by the process;

comparing the number of jobs received by the process with the number of jobs completed and passed on the process; and

10 determining a discrepancy whenever the number of jobs received by the process exceeds the number of jobs completed and passed on the process.

19. The processor-readable medium of claim 27 wherein the tracking is performed for an expected amount of time for which the jobs are to be completed.

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20. The processor-readable medium of claim 27 wherein the process is part of a set of serial processes.

21. The processor-readable medium of claim 27 wherein the
20 instructions further comprise performing a corrective action when the process when a discrepancy is determined.

22. The processor-readable medium of claim 32 further comprising
requesting for a complete set of jobs to be received when performing the
25 corrective action on the process.

23. The processor-readable medium of claim 32 further comprising requesting for jobs awaiting to be processed when the corrective action is performed.

5 24. A storage device comprising:

means for counting the number of jobs received, completed, and passed on by processes in a controller of the storage device;

means for determining if the number of jobs completed and passed on is sufficient for the number of jobs received by each process;

10 means for resetting the processes; and

means for requesting for the jobs to be resent to the processes.

25. The storage device of claim 35 wherein the means for counting comprises a job log for jobs received, completed, and passed on by each
15 process.

26. The storage device of claim 35 wherein the means for counting is performed by bandwidth analysis for jobs inputted to, and completed and passed on as output by each process.

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